EXHIBIT 20

RO-6-153

Griffin Cove Transportation Consulting, PLLC

April 29, 2019

Mr. Dan Silver, Executive Director
Endangered Habitats League
8424 Santa Monica Blvd., Suite A 592
Los Angeles, CA 90069-4267

Subject: ***Review of Fire Protection Plan for the Otay Ranch Resort Village 13 Alternative H Project County of San Diego, California***

Dear Mr. Silver:

The proposed Otay Ranch Resort Village 13 project was the subject of a Draft Environmental Impact Report (DEIR) prepared for the County of San Diego, California. (Reference: AECOM, *Administrative Draft Environmental Impact Report – Otay Ranch Preserve and Resort*, March 2015) Since that document was circulated for public review and comment, the following two sections have been recirculated for further public review: Draft Revised Global Climate Change Section 2.10 and Draft Revised Project Alternatives Chapter 4.0. In addition, the revised Project Alternatives chapter includes a number of revised appendices.

The revised Project Alternatives chapter introduces a new project level alternative, which is designated Alternative H. Among the appendices associated with Draft Revised Project Alternatives Chapter 4.0 is Appendix D-21, which presents a fire protection plan (FPP) for the new alternative. (Reference: Dudek, "Fire Protection Plan for the the [sic] Otay Ranch Resort Village Alternative H Project," September 2018)

As requested, Griffin Cove Transportation Consulting, PLLC (GCTC) has completed a review of the FPP's emergency evacuation analysis. This letter report describes the results of our detailed review of that document.

BACKGROUND

In terms of land use, Alternative H would closely resemble the proposed project. It would include the following specific components:

- Residential – 1,938 dwelling units (DU)
    - Single-family – 1,881 DU
    - Multi-family – 57 DU
- Resort uses – 16.6 acres
    - 200 rooms
    - 20,000 square feet of ancillary retail/commercial
- Parkland – 25.1 acres
- Elementary school – 10.1 acres
- Public safety site – 2.3 acres
- Community homeowner facility – 6.1 acres

All vehicular access points serving Alternative H (and the proposed project) are located on Otay Lakes Road; four such access locations are proposed, all of which would be roundabout-controlled. (Reference: Chen Ryan Associates, "Resort Village/Village 13 Alternative H – Addendum to Previous Traffic Impact Study," October 9, 2018, p. 5)

The Recirculated Draft Environmental Impact Report (RDEIR, p. 4.0-44) states:

> *As discussed in* ***Section 2.6*** *of the Draft EIR (2015),* Hazards and Hazardous Materials*, development of the proposed Project would result in significant impacts related to wildland fire hazards; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.* [Emphasis not added]

The RDEIR goes on to say (p. 4.0-45):

> *. . . Alternative H would result in similar impacts identified for the proposed Project and require the same mitigation measures identified in* ***Section 2.6*** *of the Draft EIR (2015) and summarized in* ***Table 4.0-3****. With implementation of these mitigation measures, impacts would be reduced to a* **less than significant** *level.* [Emphasis not added]

However, we note that RDEIR Table 4.0-3 presents only one mitigation measure related to Hazards and Hazardous Materials, and that measure specifically addresses "Exposure to Vectors." (RDEIR, pp. 4.0-91 – 4.0-92) Further, we note that, contrary to the statement cited above, DEIR Section 2.6 contains no mitigation measures that would reduce wildland fire impacts. (Three mitigation measures are presented in DEIR Section 2.6 (and also DEIR Section 7.0 – List of Mitigation Measures and Environmental Design Considerations, p. 7.0-35), and all of those relate to water quality basins and potential human exposure to health vectors, not wildland fire hazards.)

In any event, as with the DEIR analysis of the proposed Project, the RDEIR appears to depend heavily upon the completion of a Fire Protection Plan for Alternative H in determining that wildland fire impacts would be less than significant. However, our review revealed that the FPP is deficient, particularly with respect to consideration of traffic operations during an evacuation scenario.

FIRE PROTECTION PLAN REVIEW

Our review of the FPP revealed several issues affecting the validity of the plan. These issues, which are presented below, must be addressed prior to certification of the environmental document and approval of the proposed Otay Ranch Resort Village 13 project (or any of its alternatives) by the County of San Diego.

Of greatest concern is the total failure of the FPP to address the feasibility of safely implementing an emergency evacuation, including estimates of the amount of time needed to implement a full evacuation of the project site and whether the evacuation could be accomplished within an acceptable time period. Furthermore, no determination was made regarding the adequacy of the primary evacuation route, Otay Lakes Road, despite the fact that the FPP (p. viii) specifically states:

> *Early evacuation for any type of wildfire emergency at the Alternative H site is the preferred method of providing for resident safety, consistent with the SDCFA's* [San Diego County Fire Authority's] *current approach for evacuation.*

Moreover, the FPP states (p. 24):

> *Evacuation would be focused on early evacuations,* ***if sufficient time allows*** *. . .* [Emphasis added]

The FPP provides no information with respect to the characteristics of such an early evacuation and, more importantly, thoroughly ignores the parameters of an evacuation that is determined to be necessary when sufficient time is not available, such as a fire that erupts quickly and in close proximity to the site.

Despite the acknowledged importance of evacuation as the "preferred method of providing for resident safety," the FPP defers preparation of a Community Evacuation Plan (CEP) until some unknown future time. We believe that the CEP is an essential component of the mitigation program for wildland fires, and that it is impossible to establish that the wildland fire hazard has been reduced to less than significant status without including the CEP in the environmental documentation and, therefore, making it available for public review.

Among the specific issues that were ignored by the FPP are the following:

1. ***Project-Related Traffic Volume*** – How many project-related vehicles need to be accommodated during an evacuation? We note that the Wildland Fire Evacuation Plan prepared by Dudek for the Otay Ranch Village 14 project in San Diego County employed a value of 2.2 vehicles per household. (Reference: Dudek, *Wildland Fire Evacuation Plan for Otay Ranch Village 14 and Planning Areas 16/19*, February 2018, p. 17) Based on application of that factor, the Otay Ranch Resort Village 13 Alternative H project would generate over 4,260 vehicles during an evacuation. Coincidentally, that volume represents the approximate capacity of two lanes of a typical multi-lane roadway such as Otay Lakes Road, which is proposed to be a four-lane road (i.e., two lanes in each direction) in the vicinity of the proposed project.

   Specifically, the *Highway Capacity Manual* (Transportation Research Board, Sixth Edition, 2016), which is the most widely-accepted authority on matters relating to road capacity, indicates that the capacity of a multi-lane highway with a free-flow speed of 55 MPH is 2,100 passenger cars/hour/lane. (Reference: HCM, Exhibit 12-38, "Maximum Service Flow Rates for Multilane Highway Segments Under Base Conditions," p. 15-51) Thus, assuming that evacuating traffic would primarily be traveling toward Chula Vista, the two available lanes of Otay Lakes Road would be capable of carrying about 4,200 vehicles per hour, which is slightly less than the volume of traffic that might be generated by Alternative H under an emergency evacuation.

   However, because the FPP contains no analysis of the ability of the roadway system to accommodate evacuating traffic, it is impossible to state with certainty whether (A) an evacuation can be effectively implemented, or (B) the wildland fire impacts will truly be less than significant as the RDEIR concludes.

2. ***Non-Project-Related Traffic Volume*** – How many non-project vehicles will already be on Otay Lakes Road at the time of an evacuation, consuming badly-needed roadway capacity? It is important to recognize that Otay Lakes Road will be the primary evacuation route for areas other than the proposed project. Specifically, it must also serve the emergency evacuation needs of the Eastlake and Rolling Hills Ranch communities, as well as Jamul area residents who might approach by way of State Route 94. Consequently, evacuation-related traffic from those other areas will also be present on the roadway during the critical time period.

   Because Otay Lakes Road is the only route through the project area, it carries substantial traffic volumes even under typical, non-evacuation circumstances. As such, ambient traffic (i.e., not evacuation-related) will also likely be on that road when an emergency is declared and evacuation commences. For example, Table 8.2A and Figure 8-2B in the DEIR's traffic impact analysis report illustrate the projected daily traffic volumes under Year 2030 Base Conditions (i.e., without project traffic) along

Otay Lakes Road between SR 125 and the project site. (Reference: Chen Ryan Associates, *Traffic Impact Analysis – Otay Ranch Resort Village Project (Village 13) – Revised Report*, March 26, 2015) As shown there, the following daily traffic volumes are expected in 2030:

- SR 125 Northbound Ramp to Eastlake Parkway – 48,900 vehicles per day (vpd),
- Eastlake Parkway to Lane Avenue – 30,400 vpd,
- Lane Avenue to Fenton Street – 17,700 vpd,
- Fenton Street to Hunte Parkway – 16,800 vpd,
- Hunte Parkway to Woods Drive – 13,200 vpd,
- Woods Drive to Lake Crest Drive – 13,000, and
- Lake Crest Drive to City of Chula Vista/San Diego County Boundary – 6,400 vpd.

Consideration of the ability of Otay Lakes Road to accommodate the traffic demand associated with an emergency evacuation must fully account for the fact that non-project traffic (both evacuation-related and ambient) will also be present on the road.

3. ***Otay Lakes Road Capacity*** – What is the capacity of Otay Lakes Road, and how much of that capacity would be available to accommodate evacuating vehicles?

   As background, intersection and roadway operations are typically described in terms of level of service (LOS), which is reported on a scale from LOS A (representing free-flow conditions) to LOS F (which represents substantial congestion and delay). For intersections, the LOS designations presented in the DEIR were based on a quantitative calculation of average vehicular delay at the intersection, based on procedures documented in the *Highway Capacity Manual* (Transportation Research Board, 2000). For roadway segments, LOS was determined by comparing existing and projected daily traffic volumes to threshold values established by San Diego County and the City of Chula Vista.

   We should note that the RDEIR traffic analysis for Alternative H included no intersection analyses; only road segment analyses were documented for selected segments of Otay Lakes Road. (As an aside, it is essential that project-level traffic analyses evaluate intersection operations. Intersections are a critical component of the roadway system and, in fact, are commonly described as the "weak link" in the transportation system. As such, intersection operations typically dictate the efficiency and effectiveness of the overall system.)

   In San Diego County, traffic operations of LOS D or better (i.e., LOS A – D) are generally considered acceptable, while operation at LOS E or F is not. In Chula Vista, LOS D is considered the minimum acceptable LOS for intersections, but LOS C applies to roadway segments.

   LOS E is generally defined to represent the capacity of an intersection or road, while LOS F represents traffic demand that exceeds capacity, resulting in unstable flow and excessive vehicular delays. Unstable flow will be manifested in high levels of congestion and stop-and-go traffic, which will increase not only the time needed to evacuate, but also the levels of stress and anxiety for evacuees.

   The RDEIR analysis for Alternative H concludes that, upon completion of the proposed widening of Otay Lakes Road from two lanes to four lanes, that road will operate at acceptable levels of service under both "Existing Plus Alternative H" and "Future Year 2030 Base Plus Alternative H" conditions.

However, that analysis addressed only the segments of Otay Lakes Road within the jurisdiction of San Diego County; it ignored the portions of the road within the City of Chula Vista.

Because the Alternative H land use is essentially identical to the proposed project, the RDEIR analysis indicates that the volume of traffic associated with the alternative will be equal to that of the proposed project. (To be precise, it says that the alternative's trip generation will be "equal or less than what was studied in the previous traffic impact study," but no rationale is provided that would explain the "or less" statement, given the similarity of the land use values.) Consequently, the traffic analysis results presented in the DEIR for the proposed project are also applicable to Alternative H.

According to the DEIR (pp. 2.9-49 – 2.9-51), several roadway segments and intersections along Otay Lakes Road were found to have significant and unavoidable impacts and unacceptable levels of service, even after consideration of mitigation measures. Those facilities include:

- Existing Plus Project (Phase 1)
    - Otay Lakes Road between Wueste Road and the City of Chula Vista/San Diego Boundary (LOS F)
- Existing Plus Project Buildout
    - Otay Lakes Road/Wueste Road (LOS E, PM peak hour)
    - Otay Lakes Road between Lake Crest Drive and Wueste Road (LOS F)
    - Otay Lakes Road between Wueste Road and the City of Chula Vista/San Diego Boundary (LOS F)
- Cumulative Year (2025)
    - Otay Lakes Road/Wueste Road (LOS F, AM and PM peak hours)
    - Otay Lakes Road/State Route 94 (LOS E – AM and LOS F – PM)
    - Otay Lakes Road between Lake Crest Drive and Wueste Road (LOS F)
    - Otay Lakes Road between Wueste Road and the City of Chula Vista/San Diego Boundary (LOS F)

According to the DEIR, the mitigation measures identified for these locations are either infeasible or there is simply no certainty that the mitigation can be accomplished. Consequently, there is a reasonable likelihood that unacceptable traffic operations will continue to prevail along the primary evacuation route for project residents and others.

In conclusion, key components of the sole evacuation route (Otay Lakes Road) serving the proposed project and Alternative H are expected to operate at or above capacity, leaving no room to accommodate a sudden influx of vehicles associated with an emergency evacuation. Thus, traffic flow would be substantially impeded, with congestion and stop-and-go travel conditions likely to prevail.

In fact, traffic conditions during an evacuation will likely be worse than is assumed in the DEIR and the RDEIR. While the project and alternative traffic analyses assume that project-related traffic will be distributed in multiple directions relative to the project site (including 11 percent of project traffic distributed to/from the east on Otay Lakes Road), during a typical evacuation all traffic will be directed to travel in a single direction along Otay Lakes Road. Specifically, given the typical directionality of

fires in San Diego County, all project traffic would be directed to travel to the west. (The FPP (p. 30) states that: "The most common type of fire anticipated in the vicinity of the Alternative H area is a wind-driven brush fire from the north, northeast . . . The rate of spread would be rapid due to volatile fuels, wind, and low fuel moisture.") This will result in greater traffic demand at intersections and road segments to the west of the site.

In summary, the FPP provides no reasonable assurance that the project site can be evacuated safely and effectively in the event of a wildland fire. Moreover, it is unclear how a determination regarding the significance of the wildland fire impact can be made without a reasonable analysis of the feasibility of evacuation.

4. ***Mobilization Time*** – How much "mobilization time" will be required in connection with an evacuation? Mobilization represents the pre-evacuation notification and preparation period. It is particularly critical with respect to fires that start in close proximity to the proposed project. Such a factor should realistically represent the uncertainties inherent in any emergency evacuation situation.

5. ***Evacuation Time*** – How long will the evacuation itself take, and what will be the travel time to a safe location?

6. ***Sudden Surges in Traffic Flow*** – What will be the effect of sudden surges in traffic that might occur during an evacuation? It is extremely unlikely that traffic would be evenly distributed over time in the event of an evacuation. Instead, there will be variable pulses in traffic demand, just as there are in everyday traffic flows.

   The effect of this variability in the uniformity of traffic patterns must be incorporated into the needed analysis.

7. ***Other Factors*** – How will traffic operations on the project's internal roads and Otay Lakes Road be affected by the following factors, which are likely to prevail during an emergency evacuation due to a wildland fire?

   - The possibility that the road will be obscured by smoke, or that other fire-related factors (such as visible flames) will exist that will have the effect of reducing roadway capacity or blocking the roadway altogether.

   - The effects of trucks or recreational vehicles in the evacuating traffic stream. Because those vehicles have lower operating characteristics (i.e., slower acceleration and longer stopping distances) than passenger cars, they reduce the effective capacity of the road.

   - The emotional state of the evacuees, which could lead to irrational or unpredictable behavior by drivers.

CONCLUSION

Our review of the "Fire Protection Plan's" emergency evacuation analysis completed in connection with the proposed Otay Ranch Resort Village 13 Alternative H in San Diego County, California revealed a number of issues, leading us to conclude that the plan is inadequate. As described above, the plan has completely failed to address whether project residents can safely be evacuated in the event of a wildland fire. Consequently, it has failed to recognize the full impact of an emergency situation on the residents of the proposed project.

As noted earlier, we believe that the Community Evacuation Plan is an essential component of the mitigation program for wildland fires, and that it is impossible to establish that the wildland fire hazard has been reduced to less than significant status without including the CEP in the environmental documentation and, therefore, making it available for public review.

A revised plan must be developed prior to approval of the proposed project or any of its alternatives and the associated environmental documentation by the County of San Diego. In addition to a detailed CEP, the revised document must include a thorough analysis that addresses the questions raised here with respect to the volume of project-related traffic to be generated by the evacuation; the volume of ambient, non-project traffic on Otay Lakes Road; and the ability of Otay Lakes Road to accommodate the associated traffic demand. Further, the analysis must incorporate realistic assumptions regarding traffic flow patterns and characteristics during the course of an evacuate ion.

We hope this information is useful. If you have questions concerning any of the items presented here or would like to discuss them further, please feel free to contact me at (906) 847-8276.

Sincerely,

GRIFFIN COVE TRANSPORTATION CONSULTING, PLLC

Neal K. Liddicoat, P.E.
Principal

cc: Ms. Laurel L. Impett - Shute, Mihaly & Weinberger

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